

Abstract Submitted
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Studies of the hadronic calorimeter prototype for sPHENIX

LIANG XUE, Georgia State University, PHENIX COLLABORATION — During past three years, the RHIC PHENIX collaboration has developed its decade's upgrade refer as sPHENIX, which will incorporate two electromagnetic (EMCAL) and hadronic (HCAL) calorimeters with a large pseudo-rapidity range, and full azimuthal coverage. The HCAL will be first hadronic calorimeter ever be used at RHIC, and will enable a systematic study of jets in QGP. A accordion like HCAL prototype based on scintillator plates and steel absorber plates has been constructed and tested using test beam at Fermilab. It has two longitudinal sections, each has sixteen layers of alternately arranged scintillator and steel plates, with a total depth of 5 interaction length. In this poster, we will present the test beam performance, as well as the single particle GEANT 4 simulation studies for the HCAL prototype.

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